96163

Page 1

ranuary-23-13	11:30:29 AM											
Revision ID:	D3179-041 Fwd Litter Tie	Down	J.O.	Accept	!	N900	040	100)* s	etup Star	1 71	S1* S2*
Start Date: Required Date: Reference:	1/21/13: 2/08/13	Start Qty: 4.00 Req'd Qty: 4.00	*4* *4*	•		Cust Item I Customer:	D:					
Approvals:	Process Pla	in: ML5	Date: /3-01-	こソTooling:		Dε	ate:	_	R	un Star	^t *N	R1*
				,		Da	ite:			Stop	*N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hour	s	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Rev	ision Nbr										
D3179	Rev	С	. •									
100 *100* Bandsaw Jeaspa Bandsaw		BAND SAW Memo Cut blank	ss: 12.150" long	0.00	N	13/01/2	1		8	Ø	<u>-</u>	
110 *110* HAAS 1 HAAS CNC vertical	I machine #1.	HAAS CNC VERTIC Memo 1- Mill at Deburr p	AL MACHINING #1 sper Folio FA297 Rev: A per dwg D3179-1	0.00 0.00 <u>A</u> & Dwg D3179-1 R	ev: <u>C</u>	13, A 13)	01/31	e.	8	\$, ev .	0AS 08 _28
120 *120 *120 QC Quality Control		QC2- Inspect parts of	f machine FAI/FAIB	0.00		Ba 1	3/01/31		8	4_		0AS 08

	.,	,	
NCR:	Yes	/	No

NCR: Y	es / No				WORK ORDER NON-C	CONFOI	RMANCE / UP	DATE	DQA: QA Closed:	Date:	
Work Orde	.r.				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part N	0				Rework Scrap Use-as-is Work Order Update	The	Skid-tube Machining rmoforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
			r T	Doscri	ption of work order update	Initial		tion	Sign &		
Root Cause	Date	Step	Qty		or Non-conformance	Chief Er		cription	Date	Verification	QC Inspector
Doc/Data	Dute	Jacep	<u> </u>		or trott comorniance		8				
Equip/Tooling						ļ					
Operator											
Material					Sec.						
Setup			1 1								
Other											
Process	_					1					
Supplier	_										
Training	_										
Unapproved						1111760	FCORV			ł	
						AULT CA	EGURY				
Landir	n g Gear Bendin	~			General Bend	Grain	,		Ovalized	Г	Pressure/Forced
·		ช Not Conce	ntric to (7/5	BOM/Route	Hard		-	Over/Under	tolerance	Temperature/Cure
	Cracks	ivot conce	meric to t	³ / ₃	Broken/Damaged	\vdash	ction Incomplete		Part Incorre	 	Weld
	 i	d/Crimped		ļ	Burrs		ictions Incomplete	/Unclear	Part Lost/M	 	Wrong Stock Pulled
Ī	Cuffs	,	•	<u> </u>	Contamination	\vdash	itenance		Part Moved		_
	Heat T	eat			Countersink	Misla	beled		Positioned \	Wrong	
		ion Strip ir	1 Tube		Cut Too Short	Misre	ead		Power Loss,		Other
	Ripples	in Bend			Drill Holes	Offse	t .	_			
	Torque	Waves in	Extrusior	1	Drawing	Out	of Calibration				
	Turnin	g Sequence	2		Finish	Out	of Sequence				
	Wave/	Twist in Tu	be		Folio	Outs	de Dirnensions				

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Order ID 96163 *96163* January-23-13 11:50:29 AM Item ID: D3179-041 Accept *N900040100* Setup Start **Revision ID:** Item Name: Fwd Litter Tie Down */* Start Oty: 4.00 Start Date: 1/21/13 **Cust Item ID:** Required Date: 2/08/13 **Reg'd Oty:** 4.00 Customer: Reference: Run Process Plan: Date: Tooling: Approvals: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Work Center ID Description Qty Code Qty Number Stamp **Run Hours** 130 OC8- Inspect parts - second check 0.00 *120* OC 0.00 Memo

140 *140* HandFinish

Hand Finishing

Quality Control

0.00

Memo

Chemical Conversion Coat per OSI005 4.1

0.00

× 16 13-25

Page 2

Insp.

13.02.05

150

150 OC

Quality Control

OC3- Inspect Part Finish

Memo

0.00

0.00

8 6 18-26 (200)

												▼
										DQA:	Date	. <u> </u>
NCR: Y	es / No				WORK ORDER NON-O	CONFO	RM	IANCE / UPD	DATE			
									****	QA Closed:	Date	
Work Orde	r·				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
					Rework			Skid-tube	Crosstube]	Water Jet	Engineering
Part N	0			<u> </u>	Scrap	↓		lachining	Small Fab		d. Eng. Coor.	Quality
NCR N					Use-as-is Work Order Update	The		oforming arge Fab	Finishing Composite	Rec/Stor	re/Packaging Supplier	Other
NCK IV	o				Work Order Opdate	_ L	_	arge rab	composite	₫	Supplier _	J
Root				Descri	ption of work order update	Initia	1	Acti	ion	Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chief E	ng	Descr	iption	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator			1				İ					
Material												
Setup												
Other					•		Ì					
Process												
Supplier												
Training												
Unapproved			<u> </u>			AULT CA	TEC	CORV		1	1	
Landir	ng Gear				General	AULI CA	ATEG	- IONT				
	Bending			Г	Bend	Gra	in			Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to 0	_{0/s}	BOM/Route		dwar	e		Over/Under	tolerance	Temperature/Cure
	Cracks	0000			Broken/Damaged	\vdash		on incomplete		Part Incorre	ct	Weld
	Crushed/	Crimped	_		Burrs			ons Incomplete/U	Jnclear -	Part Lost/M	issing	Wrong Stock Pulled
ŀ	Cuffs				Contamination			nance		Part Moved		
	Heat Trea	at		<u> </u>	Countersink	Misl	label	ed		Positioned \	Wrong	
	Inspectio		Tube		Cut Too Short	Mis	read			Power Loss,		Other
	Ripples in	•			Drill Holes	Offs	set		_			
	Torque V		Extrusion	,	Drawing	Out	of Ca	alibration				.
	Turning S				Finish	Out	of Se	equence				
	Wave/Tv	vist in Tul	be		Folio	Out	side	Dirnensions				

Work Order ID 96163 *96163* Page 3 January-23-13 11:50:29 AM Item ID: D3179-041 Accept *N900040100* Setup Start Revision ID: Stop Item Name: Fwd Litter Tie Down *//* Start Date: 1/21/13 Start Oty: 4.00 **Cust Item ID:** Required Date: 2/08/13 Rea'd Otv: 4.00 **Customer:** Reference: Run Approvals: Process Plan: Date: Tooling: Date: Stop OC: Date: **SPC (Y/N):** Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reiect Reiect Insp. Work Center ID Description **Qty** Oty **Run Hours** Code Number Stamp 5.7 er QSI005 4.3-Alum 0.00 *160* Powdercoat Powder Coating 170 QC3- Inspect Part Finish 0.00 *170* OC 0.00 Memo Quality Control 180 0.00 Small Fab *180* Small Fab 0.00 Memo Small Fab Assemble as per Dwg D3179

Open Role \$5.246

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFORN	//ANCE / UP	DATE			* * *
											QA Closed:	Date:	
Work Orde	er.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part f	- ۔ No.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update	I	Initial	Ac	tion	Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
						F	AUL	T CATE	GORY				
Landi		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspection	Crimped, t n Strip in		o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		Instruct Mainte Mislabe Misread	on Incomplete ions Incomplete/ nance led	'Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
İ	[]	Ripples in	Bend		l	Drill Holes	1	Offset					

Out of Calibration

Out of Sequence

Outside Dirnensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde	er ID 96			*9616	3.3*							Page 4	-
Revision ID: Item Name:	D3179-041 Fwd Litter Ti 1/21/13		*4* *4*	Accept	*N900 Cust Item I Customer:		100)*	Setup	Start Stop	*N:	S1* S2*	٠
Approvals:	Process Pla	an:		Tooling: SPC (Y/N):		ate:]	Run	Start Stop	*N *N	R1* R2*	
Sequence ID/ Work Center II 190 *1 QC Quality Control)	Operation Description QC5- Inspect part compl	eteness to step on W/O	Set Up/ Run Hou \$5 0.00 \$5 0.00 \$3. 2. 12	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp	
200 *200* Packaging Packaging		Identify as per dwg & St Memo	ock Location (0.00				SX	<u>,</u>		<u></u>	3-3	1
210 *210* QC Quality Control		QC21- Final Inspection Memo	· Work Order Release	0.00						13,	12/13	5 1) 100 K	

MF -13-2-14

NCR:	Yes	/ No
NCK:	162	/ 110

DQA: _____ Date: ____

NCR: Y	es / No				WORK ORDER NON-C	CONFOR	MANCE / UP	DATE	QA Closed:	Date	.
					DISPOSITION			AGAINST DE		*** * * * * * * * * * * * * * * * * * *	
Work Orde			-		Rework]	Skid-tube Machining	Crosstube Small Fab	Pro	Water Jet	Engineering Quality
Part N NCR N					Scrap Use-as-is Work Order Update	Ther	moforming Large Fab	Finishing Composite	Į	re/Packaging Supplier	Other
Root				Descr	iption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief En	Desc.	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling										,	
Operator	_					1					
Material											
Setup											
Other	_										
Process											
Supplier	_										
Training	_										
Unapproved		1					5000			<u> </u>	
						AULT CAT	EGORY		.*		
Landin F	g Gear				General	Grain		_	Ovalized	Г	Pressure/Forced
-	Bending	-4 (~ -	Bend BOM/Route	Hardy		-	Over/Under	taloranco	Temperature/Cure
	Centre N Cracks	ot Conce	ntric to	^{0/3} -	Broken/Damaged		tion incomplete	-	Part Incorre		Weld
}	Crushed/	Crimnad		-	Burrs		ctions Incomplete/	Undear	Part Lost/M	<u> </u>	Wrong Stock Pulled
-	Cuffs	Cimpea		-	Contamination	\vdash	tenance	Officieal	Part Moved	_	
-	Heat Trea	a t		-	Countersink	Mislal		-	Positioned \		
ŀ	Inspectio		Tube	-	Cut Too Short	Misre		<u> </u>	Power Loss		Other
}	Ripples in		· usc		Drill Holes	Offset		L	J. 5c. 2000)		
}	Torque V		Extrusio	, -	Drawing		f Calibration				
ŀ	Turning S				Finish	⊢ ⊸	f Sequence			· · · · · · · · · · · · · · · · · · ·	
ŀ	Wave/Tv			-	Folio	\blacksquare	de Dimensions				

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Picklist Print

January-23-13 11:50:28 AM

Work Order ID:

96163

Parent Item:

D3179-041

Parent Item Name:

Fwd Litter Tie Down

Start Date: 1/21/13

Required Date: 2/08/13

Page 1

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP A1 03.01.09 Added Acid etch end alodine RF

IPP Rev:B Added Powder Coat 07-07-04 JLM

IPP Rev:C 08-12-10 add part list DD verified by:JLM

	11 1 Kev.C 00-12-	10 add part list 1	UD VCII										
Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2372 Quick Release		Manufactured	No			180	Each	15.0000	2	8		3/8	- /i-
				Location GA 8600		Loc Qty 15 2	<u>L</u>	oc Code) B,	9623	2
D2444 Pip Pin Assembly		Manufactured	No	9219	9	180	Each	3.0000	1	4 /	Bi	Soz	3
				Location GA 8849	98	Loc Oty 3	<u>L</u>	oc Code	-	<i>l</i>	B9	6216	80
D6201 "T" Extrusion		Manufactured	No	Q 0.13	·	180	f	46.4586	1.0125	4.26315	79		· ***
		· &		Location MAT028 → 8142	21	<u>Loc Qtv</u> 46.45863153 13.1586315		oc Code	0	5-11	mf,	13/2	/2-
				8398 8964	37	13.1386313			_ <u>_</u>		, /~ /	J/01	1 OG

.

11CIV. 1C3 / 11U	NCR:	Yes	/	No
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DQA: Date:

NCR: Ye	es / No				WORK ORDER NON-	CONFC)RN	MANCE / UPI	DATE	QA Closed:	Date	÷
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
Part N					Rework Scrap Use-as-is] 	٨	Skid-tube Machining oforming	Crosstube Small Fab Finishing		Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	o				Work Order Update] ```		Large Fab	Composite		Supplier	
Root				Descri	ption of work order update	Initia	al	Act	ion	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chief E	Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data						ŀ						
Equip/Tooling	_											
Operator							1			-		
Material											<u>.</u>	
Setup												
Other												
Process	4]		
Supplier							ĺ					
Training							ļ					
Unapproved		ļ				AULT CA	ATE (SOBA			<u></u>	<u> </u>
Landin	a Goor		 		General	AULICA	MILC	30(1)				
	Bending				Bend	Gra	in		<u> </u>	Ovalized	Γ	Pressure/Forced
}	Centre No	nt Conce	ntric to C)/s	BOM/Route	\vdash	dwai	re		Over/Under	tolerance	Temperature/Cure
<u> </u>	Cracks	or conce		"" <u> </u>	Broken/Damaged	\vdash		on Incomplete	<u> </u>	Part Incorre		Weld
}	Crushed/	Crimped			Burrs	\vdash		ions Incomplete/l	Unclear	Part Lost/M	- H	Wrong Stock Pulled
F	Cuffs	сттреа		-	Contamination			nance		Part Moved		
<u> </u>	Heat Trea	at			Countersink	\vdash	labe			Positioned V	Vrong	
·	Inspection		Tube	<u> </u>	Cut Too Short	\vdash	read			Power Loss/	· ·	Other
<u> </u>	Ripples in	-		-	Drill Holes	Offs			<u> </u>	J	· [
<u> </u>	Torque W		Extrusion	, <u> </u>	Drawing	\vdash		Calibration				
	Turning S				Finish	⊢		equence				
<u> </u>	W/ave/Tv	•			Folio	\vdash		Dimensions				

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January-23-13 11:50:28 AM

Work Order ID:	96163									
Parent Item:	D3179-041								ate: 1/21/13	Required Date: 2/08/13
Parent Item Name:	Fwd Litter Tie Dow	/n						Start (Qty: 4.00	Required Qty: 4.00
MS21042L3 Nut		Purchased	No		•	180	Each	7,697.0000	1	4/03/02/13
		٠		Locatio	<u>n</u>	Loc Oty		Loc Code		
				FP001		3				
					122141	3				
				GA		434				
					122452	434			8	
				ST314		268				
					117885	32				
					119017	55				
					119075	138				
					123265	43				
				ST506		6992				
					123900	2992				
					124291	4000				— <i>D</i> / /
AS27039-1-13		Purchased	No			180	Each	568.0000	1	4 5/3/12/
Screw	*									70/06/1
				<u>Locatio</u>	<u>n</u>	Loc Oty		Loc Code		
				GA		16				
					119736	16				· ·
				ST304		52				
					119736	. 52				
				ST506		500				
					124326	500				
NAS1149D0332J Washer		Purchased	No			100	Each	1,352.0000	3	12 / 5/3/02/
	•			Locatio	<u>on</u>	Loc Qty		Loc Code		
				FP001		182	,			
					122973	182				
				ST294	- · · -	1170				
				Ģ12 <i>)</i> -T	122973	1170			-2	4

·											DQA:	Date:	, , .
NCR: Y	es	/ No					WORK ORDER NON-C	O	NFORM	MANCE / UPDATE	·		•
											QA Closed:	Date:	
Nork Order:					DISPOSITION		AGAINST DEPARTMENT/PROCESS						
Part No.					Rework Scrap Use-as-is		Skid-tube Crosstube Small Fab Thermoforming Finishing		Water Jet Prod. Eng. Coor. Rec/Store/Packaging		Engineering Quality Other		
NCR No.					Work Order Update			Large Fab Composite	Supplier				
Root					Desc	rip	tion of work order update	1	nitial	Action	Sign &		
Cause		Date	Step	Qty		0	r Non-conformance	Ch	ief Eng	Description	Date	Verification	QC Inspector
oc/Data													
quip/Tooling													
perator	\Box												
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etup													
ther													
rocess													
upplier								İ					
raining											1		
Inapproved										<u> </u>			
				,			F	AUI	T CATE	GORY			
Landi	ng G	iear			_	_	General	_	1	_		_	ا ا
		Bending			Bend		Grain		Ovalized		Pressure/Forced		
		Centre Not Concentric to O/S		$\overline{}$	BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure		
		Cracks		, [_	Broken/Damaged	Inspe		Inspection Incomplete		ct	Weld	
	Crushed/Crimped.				Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled		
	Cuffs				Contamination		Maintenance		Part Moved		•		
	Heat Treat				Countersink		Mislabeled		Positioned Wrong		_		
[Inspection Strip in Tube				Cut Too Short	L	Misrea	d [Power Loss/Surge Other		Other		
	Ripples in Bend				Drill Holes		Offset						
[Torque Waves in Extrusion				Drawing		Out of	Calibration					
	Turning Sequence				Finish		Out of Sequence						
	Wave/Twist in Tube				Folio	Outside Dirnensions							

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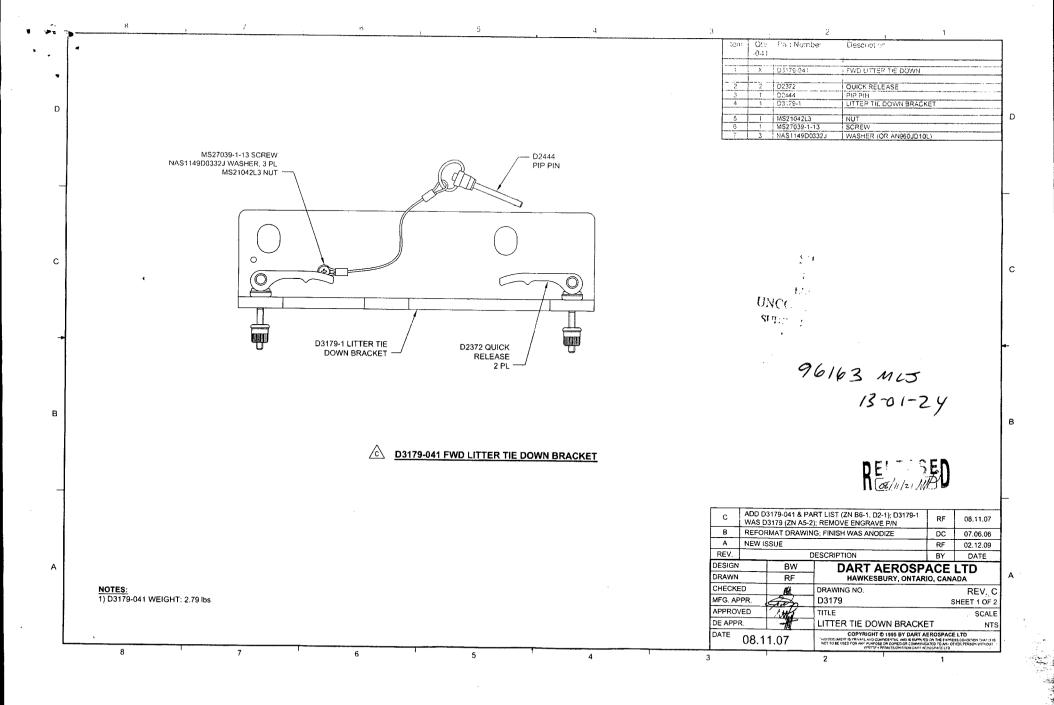
DART AEROSPACE LTD	Work Order:	96163
Description: Fwd Litter Tie Down Bracket	Part Number:	D3179-1
Inspection Dwg: D3179 Rev: C		Page 1 of 1

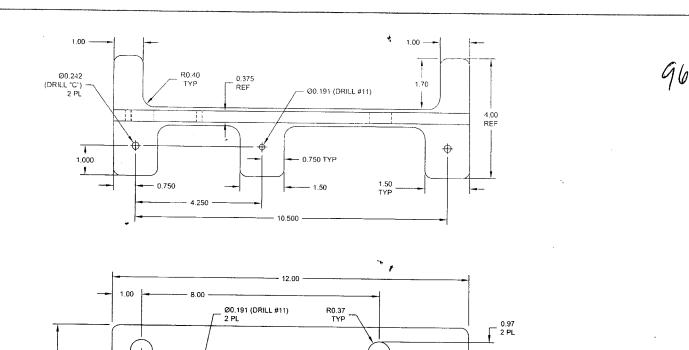
FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/-0.030	0,998			Vein	6A-01
Ø0.242	+0.005/-0.001	\$ 0.243	~		11	11
R0.40	+/-0.030	R 0.400	~		R-6	ref.
0.375	+/-0.010	0.385			Vern	68-01
Ø0.191	+0.005/-0.001	\$0.192	~		11	1!
1.00	+/-0.030	1.000	~		()	11
1.70	+/-0.030	1.700	V		H-6	31006
4.00	+/-0.030	4.000	~		Vern	6A-01
1.50	+/-0.030	1.501	V		. 4)	f t
0.750	+/-0.010	0.750	~		()	11
1.50	+/-0.030	1.501	>		2)	11
10.500	+/-0.010	10.500	~		CNC-02	Vern
4.250	+/-0.010	4.250	~		Vern	6A-01
0.750	+/-0.010	0.750	\		11	11
1.000	+/-0.010	1.001	·-		/1	11
12.00	+/-0.030	12.000	✓		Vern	CNC-02
1.00	+/-0.030	0.998	~		21	//
8.00	+/-0.030	8:000	✓		13	<i>f</i> (
Ø0.191	+0.005/-0.001	\$0.192	~		Vem	6A-01
R0.37	+/-0.030	R 0.370	~		R-6	ref.
0.97	+/-0.030	0.969	<u> </u>		Vern	6A-01
1.86	+/-0.030	1-856	~		11	11
0.750	+/-0.010	0.750	<u> </u>		11	At
0.375	+/-0.010	ŭ.380			3)	11
2.875	+/-0.010	2.874			(1	11
0.500	+/-0.010	0.499	~		(!	(1
1.250 '`	+/-0.010	1.253	✓ 		H-6	31006
1.625	+/-0.010	1.628	\sim		11	1,
3.31	+/-0.030	3.312			Vern	6A-01

Measured by: 1.8 08	Audited by:	Preliminary Approval:	
Date: 13/01/31 ⁰⁻⁸⁹	Date: 13.02.65	Date:	

Rev	Date	Change	Revised by	Approved	
Α	09.04.05	New Issue P/O D3179-041	KJ/DD ~ 1	- /1/	
В	12.10.04	Dimension 0.750 was 1.750	KJ (XX)	(/1/	





0.750

TYP

D3179-1 LITTER TIE DOWN BRACKET

0.375

REF

1) MATERIAL: MAKE FROM D6201-012 EXTRUSION (6061-T6/T6511 PER QQ-A-200/8)

2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED 4) UNITS: INCHES UNLESS OTHERWISE NOTED

1.625

1.250

0.500

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART P/N D3179-1 USING FINE POINT PERMANENT INK MARKER ON THE BOTTOM FACE

7) WEIGHT: 2.3 lbs

С

DESIGN DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWN RF CHECKED DRAWING NO. REV. C MFG. APPR. D3179 SHEET 2 OF 2 APPROVED TITLE - SCALE DE APPR. LITTER TIE DOWN BRACKET NTS COPYRIGHT O 1995 BY DART AEROSPACE LTD.

STORENGE AND COMMUNICATION OF THE STORENGE CONTROL NAT OF SEASON OF THE STORENGE CONTROL NATIONAL CONTROL DATE 08.11.07

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1.86

2 PL

С